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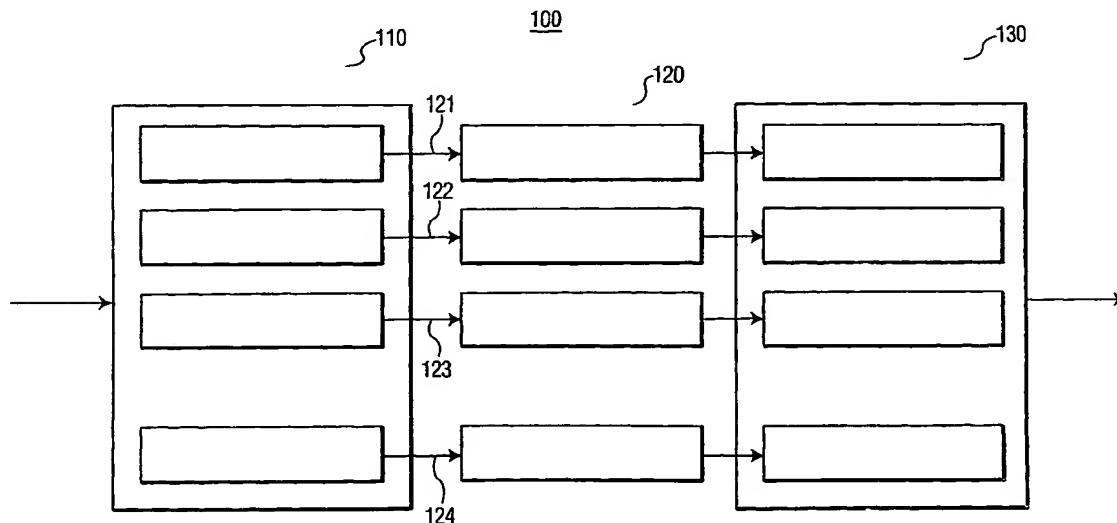
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[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR RATE-DISTORTION OPTIMIZED DATA PARTITIONING FOR VIDEO CODING USING PARAMETRIC RATE-DISTORTION MODEL



(57) Abstract: A system and method are disclosed that provide a simple and efficient layered video coding technique using a parametric rate-distortion (RD) model. The video coding system may include an rate-distortion optimized data partitioning encoder and decoder. The generalized RD-DP encoder adapts the partition point block-by-block which greatly improves the coding efficiency of the base layer bit stream without explicit transmission thereby saving the bandwidth significantly. Furthermore, even for the non-parametric rate-distortion curves, the parametric rate-distortion model prevents the underpartitioning of the base-layer from happening, and the parametric model is simultaneously being updated at the encoder and decoder for synchronization.

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